

DETAILED ACTION

Election/Restriction

1. Applicant's election without traverse of the species of "component temperature" in an Applicant's Response to an Election/Restriction Requirement submitted on January 12, 2010 is acknowledged. Claims 11-19 are readable thereon and will be examined in their full merit. Claim 20 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 11-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tarabulski et al. (U.S. Patent 6,063,350).

Re claim 11, as shown in Figures 1 and 5, Tarabulski et al. disclose a method for metering a reagent into an exhaust gas flow of an internal combustion engine, the method comprising:

- guiding the reagent in at least one component (30);

- recording (via temperature sensor (143)) a measure for a temperature of the component;
- comparing (see Figure 5) the measure for the temperature to a predefined temperature threshold value (T_{min}); and
- making (at least one of “reverse pump” step and “maintain T_{min} with Vauxiliary” step in Figure 5) available a service signal in response to the temperature exceeding the predefined threshold value.

Tarabulski et al., however, fail to disclose that the method further comprises the steps to verify the meaningfulness of individual measured values, to eliminate individual measuring errors, and to have available a representative value for a service signal.

It is well known to those with ordinary skill in the art that in order to obtain reliable temperature of the component, Tarabulski et al. apply a standard procedure in signal measuring technology; wherein the procedure includes the steps of counting a number of times the temperature threshold value is exceeded in a counter, predefining a count threshold value for the number of times the temperature threshold value is exceeded, and comparing the count of number of times to the count threshold value. Therefore, such disclosure by Tarabulski et al. is notoriously well known in the art so as to be proper for official notice.

Re claim 12, in the modified method of Tarabulski et al., the temperature threshold value is equivalent to a freezing temperature of the reagent.

Re claims 18-19, the modified method of Tarabulski et al. further comprises obtaining the measure for the temperature of the component from a signal of at least one temperature sensor (143), wherein the temperature sensor records the temperature of the component.

Re claim 13, the modified of Tarabulski et al. further comprises, after shutting down the internal combustion engine, during coasting, ascertaining whether the component is filled with the reagent.

Re claim 14, in the modified method of Tarabulski et al., the counter is an ice counter, and the ice counter counts an exceeding of the temperature threshold value only when the component is filled with the frozen reagent.

Re claim 17, the modified method of Tarabulski et al. further comprises counting an exceeding of the temperature threshold value only at a start of the internal combustion engine.

Re claims 15-16, the modified method of Tarabulski et al. discloses the invention as cited above, however, fails to disclose that during the ascertaining of whether the component is filled with the reagent, at least one of a compressed air signal is evaluated and an operation of an emergency stop switch is taken into consideration.

It is also well known to those with ordinary skill in the art that in order to ascertain of whether the component in Tarabulski et al. is filled with the reagent, a compressed air signal is evaluated or an operation of an emergency stop switch is taken into consideration. Therefore, such disclosure by Tarabulski et al. is notoriously well known in the art so as to be proper for official notice.

Prior Art

4. The IDS (PTO-1449) filed on October 11, 2005 and October 3, 2008 has been considered. An initialized copy is attached hereto.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of five patents: Weigl (U.S. Patent 6,519,935), Mikkelsen et al. (U.S. Patent 6,550,250), Lambert et al. (U.S. Patent 6,810,661), Wills et al. (U.S. Patent 7,067,319), and Levin (U.S. Patent 7,578,321) further disclose a state of the art.

Communication

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tu Nguyen whose telephone number is (571) 272-4862.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Thomas E. Denion, can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TMN
April 25, 2010

/Tu M. Nguyen/
Tu M. Nguyen
Primary Examiner
Art Unit 3748